

REMARKS

All of the pending claims were rejected in the above-mentioned Office Action as being obvious primarily in view of the cited Shintani patent when combined with various additional references. Applicants respectfully submit that for the reasons given below amended Claim 1 is patentably distinct over such prior art.

As amended, Claim 1 now pertains to a sensor integrated on a single semiconductor substrate, including a sensor block, a signal processing block for processing a signal from the sensor block, and a voltage supply unit for supplying different voltages to the respective sensor block and signal processing block. Also, Claim 1 now requires that the voltage supply unit receives power from a single power source disposed externally of the single semiconductor substrate. In this regard, Claim 1 is now directed to the structure of Applicants' Fig. 6.

In the Office Action it is pointed out that the cited Shintani patent discloses a sensor block, a signal processing circuit, and a power supply unit for supplying high and low voltages.

However, according to the present invention as now claimed, there is arranged on a common chip (1) a sensor block, (2) a signal processing block, and (3) a voltage supply unit, wherein the voltage supply unit is supplied with electric power from the single power source arranged externally of the semiconductor substrate, and wherein the voltage supply unit generates voltages of different amplitudes required in the chip.

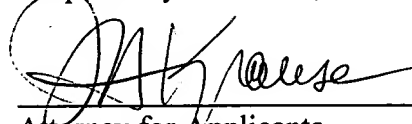
In this regard, Applicants respectfully submit that the cited references, no matter how they may be combined, do not disclose the above-characterized features of amended Claim 1. Specifically, the prior art does not disclose a voltage supply unit for

generating voltages of different amplitudes based on the single input power source, arranged in the common chip, nor a power source for supplying the power to the voltage supply unit arranged outside of the chip. This claimed structure is advantageous in reducing the number of input terminals as compared to conventional structure wherein the number of the input terminals of the chip is the same as the number of the necessary voltage power sources. The claimed invention is advantageous also in that the arrangement of the separate power source alleviates the possibility of introducing noise into the sensor block.

In view of the foregoing amendments and remarks, Applicants respectfully submit that all of the claims are allowable, and the issuance of a formal Notice of Allowance is solicited.

Applicants' undersigned attorney may be reached in our New York Office by telephone at (212) 218-2100. All correspondence should continue to be directed to our address listed below.

Respectfully submitted,



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